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Case of Abdominal Tumour (Fibro-scirrhous) connected with the Uterus. Autopsy and Remarks by C. W. PENNOCK, M. D., Physician to the Philadelphia Hospital, Blockley. (With a Coloured Plate.)

To the Editors of the Medical Examiner.

GENTLEMEN:—During the autumn of 1838, a negress entered the black women's medical ward of the Philadelphia Hospital, presenting an enormous distention of the abdomen from an internal tumour. The case excited much interest, and was regarded as one of ovarian dropsy; but since the autopsy has shown this to be incorrect, and as the precise diagnosis of similar cases must be peculiarly difficult, I take the liberty of sending you the history of this, with the accompanying plate, which has been very faithfully executed by Mr. Collins.

Yours, very truly, C. W. PENNOCK.

Eliza Hyson, (black,) aged thirty-six, married at nineteen, has never had children, has miscarried four times; in the three first instances between the sixth and seventh months, without any known cause; in a fourth pregnancy, fourteen years since, in the fifth month of gestation, was severely beaten and kicked in the lumbar region, which was followed by abortion the next morning. Since this event, she has not been pregnant; the menstrual function, however, has continued until the last three months; no pain was experienced at the usual menstrual period, and the appearance of the secretion was natural. Twelve years since, (two years after the beating,) a distention by a tumour in the right lumbar region was observed, which was mistaken for pregnancy; this tumour has gradually increased in size, and now presents an enormous enlargement. It has never been attended with pain, and she came into the hospital in consequence of the weight and inconvenience of the tumour, rather than for any other cause. Transient œdema of the limbs occurred in 1838. In the autumn of 1838 she entered the hospital, and was placed in the wards of Dr. Dunglison, where she remained some months. Being somewhat relieved, she requested her discharge; and, after a short absence, returned, the size of the tumour being much augmented. A few days after her re-entrance, the patient presented the following symptoms:

February 14th.—Present state. Slight emaciation; nothing peculiar in the expression of the countenance; intelligence perfect; no cellular infiltration; skin natural; decubitus dorsal on the left side; position in bed slightly elevated. *Chest*—well formed. Percussion preternaturally resonant, and respiration feeble beneath right clavi-

vicle—elsewhere normal. *Percussion of heart* shows it dilated; rhythm of heart nearly normal; slight bellows sound accompanies the first, heard beneath the cartilage of left third rib, and beneath the cartilages of second and third ribs on the right side, near the sternum. Pulse eighty, easily excited, somewhat tense. Abdomen enormously distended by an internal tumour; the measurement from the symphysis of pubis to the ensiform cartilage, three feet; circumference round the umbilicus four feet eight inches. Percussion is flat, with the exception of right lumbar region near the spine, where it is resonant. In the epigastric and upper part of umbilical regions, abdomen soft, elsewhere hard; hard globular masses, resisting pressure, felt in different portions of abdomen, particularly in the hypogastric, right iliac, and lumbar, extending up to right hypochondriac; fluctuation caused by palpitation on left side of tumour—none anteriorly, imperfectly felt on right side. Appetite good; constipation; some difficulty in urining; pulsation of femoral arteries distinct, but feeble.

In examination per vaginam, the finger is introduced with difficulty, from pressure of tumour filling the greater part of the cavity of the pelvis; the os tincæ, found towards the right iliac crista, soft, and unchanged—neck not obliterated. The tumour, by strong pressure, may be raised, but, upon withdrawing the hand, it sinks heavily downwards.

Treatment, palliative: mild cathartics; simple, nutritious diet; hip baths; fomentations to abdomen, &c.

On the 20th, fluctuation was observed in the upper and lateral portions of the abdomen, conveying the sensation of the existence of a slight effusion of fluid between the external parietes and tumour; no pain on pressure; pulse rather more tense, ninety per minute; skin of natural heat. Patient was directed to drink an infusion of juniper berries. *R.* Bacc. juniperi 3j., bi-tart. potassæ 3ij., aqua Oj. in the day, and pulv. Doveri gr. viij. at night. The fluid diminished very sensibly in a few days. No marked fever was at any time observed; patient remained almost constantly in a recumbent posture, not, as she frequently stated, from pain, but in consequence of the weight and sense of distention when sitting. Emaciation and debility rapidly increased.

Absence from the city prevented my seeing the patient during the last week of her life. My friend Dr. Barnes, resident physician, reports, that on the 1st of March, she had a severe chill, followed by fever, pain in the abdomen, great dyspnœa, and the physical signs of peritonitis and pneumonia. All means of relief proved unavailing, and this acute attack caused death in

less than thirty-six hours from its commencement.

Autopsy fifty hours after death.—Frame, medium size; much emaciation; no effusion into cellular tissue. Abdomen greatly enlarged, of an irregular globular form, measuring thirty-one and a half inches from pubes to ensiform cartilage; circumference over umbilicus, where distention is greatest, fifty-one inches. Percussion of abdomen flat, except in epigastric region, where it is resonant. Abdomen soft, except in hypogastric and right lumbar regions, where a hard, irregular, semicircular mass is felt, resembling a fœtus at term; a globular mass is also felt to the left of umbilicus; fluctuation by palpitation in umbilical region.

Opening the abdomen, two quarts of fœtid, bistre coloured fluid, escaped. Peritoneum and omentum thickened, covered with numerous bright scarlet patches, and are firmly united by bands to contiguous organs. Raising the omentum, a large globular tumour is seen, by which the intestines are displaced, and forced into the epigastric region; this tumour, sixteen by fourteen inches, occupies the whole of the hypogastric, umbilical, and greater part of the lumbar regions, and is anterior to the uterus, to the body of which it is firmly connected. United to this large tumour at its inferior and left lateral margin is another tumour, which projects into the cavity of the pelvis, and rests principally in the left iliac fossa. The tumours are firmly attached to the parietes of the abdomen and pelvis by membranous bands, and are covered externally by the peritoneum, which is much thickened, of a dark red colour, and interspersed with patches of minute arterial vessels. The large tumour on its right lateral margin, is united in the extent of two inches with the cellular coat of the fundus and body of the uterus. Cellular tissue connects the peritoneal coat with the proper capsule of the tumours, which is of a pearl colour, hard, fibro-cellular, and a line in thickness. Near the connection of the tumour with the uterus, cellular tissue is very abundant; it contains numerous meshes of blood-vessels, principally veins—is deeply injected, and resembles muscular fibre. The tumour, somewhat irregular and lobulated, is of unequal firmness—in some spots soft to the touch, in others hard and resisting; evident fluctuation exists over the softer portions, corresponding with that observed during life. Incision being made into the large tumour, it is found to be filled with more than six gallons of fœtid, yellow-brown, (café-au-lait,) thick, and viscid fluid, in which float yellow flocculi and small fibrous masses. The walls of the tumour, from three lines to three inches thick, are of variable consistence, which, in some parts, resembles that of cartilage and grating under the scalpel—in others, the firmness of pork. General aspect of its surface, when cut, is of a light blue, passing into French gray, interspersed with pale pink, and is intersected with striæ of pearly whiteness: these bands divide it into small masses, which are smooth when first cut, but soon raise in slight

elevations. The internal surface of the tumour is very irregular; in its walls are cells filled with a yellow deposit, of the consistence of cheese, and numerous pendant masses, of the fibrous character and appearance above mentioned, are attached to its parietes. Some portions of the internal surfaces are much injected, of a bright arterial hue.

The tumour in the left iliac fossa is five inches by four; shape ovoid; very firm, scalpel cutting it with difficulty; solid, with the exception of a small central canal, by which it communicates with the large tumour; around this canal, substance is softened, of a yellowish-brown colour. The tumour is fibro-scirrhous, and resembles in structure the walls of the large tumour.

The uterus, displaced, lying towards the right crista of the ilium, irregular in shape, three inches long, two wide, hardened, and scirrhus; its walls present a very evident muscular structure, the fibres of which interlace with the capsules of the tumours; when cut, the parietes present a marbled appearance, from pale blue and straw-coloured nodules, intersected by white striæ. The neck is much elongated, five inches in length, and lies between the two large tumours first described. *Os tinæ* natural, soft to the touch. *Ovaries.*—*Right ovary* slightly enlarged, contains an ounce of thick, glutinous, and hard fluid; *left ovary* normal. In the broad ligament, near its fibriated extremity, are numerous deposits in the cellular tissue of small, flat, circular, carcinomatous masses.

Near the fundus of the uterus, connected with its cellular coat, and covered by its peritoneal, are three sessile, unsoftened fibro-scirrhous tumours, from the size of a hazle-nut to that of a walnut. A fourth tumour, fibro-cartilaginous externally, and containing a thick, yellow, gelatinous fluid, similar to the largest tumour, is embedded in the cellular tissue. A pedunculated tumour, two inches in diameter, is connected with the neck of the uterus by a slender stem, four inches long.

Stomach contracted; mucous membrane very pale; cellular and muscular coats thickened, particularly near pylosis; pyloric orifice contracted and hardened.

The *small intestines* throughout very pale; mucous coat normal; absence of red vessels in mucous tissue, but numerous vessels containing globules of yellow substance seen in the jejunum. *Mucous coat of colon* dark gray, consistence normal; cellular tissue much thickened and opaline.

Mesenteric glands generally normal; meso-colic hardened and scirrhus, slightly enlarged.

Liver, slate colour, not congested, somewhat enlarged; consistence natural; gall bladder distended by bile, of thin consistence, and of a bright lemon hue.

Kidneys, left atrophied, pale; bossellated, cortical substance granulated; attached to it are several hydatids, of the size of a hazle-nut. The right kidney enlarged, displaced, resting on the bodies of the vertebræ; cortical substance buff-coloured, slightly granulated.

Spleen enlarged, six by four inches; soft, friable; no carcinomatous deposit.

Bladder—parietes thinner than natural, otherwise healthy.

Ureters pass on either side around the semi-circumference of the large tumour.

Thorax—lungs. The right normal, except along the upper margin of the upper lobe, where it is emphysematous. *Left*, congested, friable, not hepatized.

Heart. Pericardium adherent to left pleura; upon its surface are raised opaline patches; no adhesion of pericardium to the heart. Right cavities of the heart are dilated; valves of the aorta are thickened, ossific deposit on the edges; mitral valve thickened with cartilaginous deposit; parietes of right ventricle three and a half lines; left, normal.

Brain, not examined.

Remarks.—From the colour of the serous membranes, and from that of the fluid found in the cavity of the abdomen exterior to the tumour, it is evident that chronic peritonitis and ascites must have existed for some time. The symptoms occurring in the last days of life, the vivid arterial redness in patches on the peritoneum, and the engorgement of the left lung, prove the immediate cause of death to have been an attack of acute peritonitis, with commencing pneumonia.

All the tumours were evidently of the same character; the identity of the structure of the walls and internal pendant masses of the large tumour with the formation of the others, show, that originally it must have been solid throughout. The colour, pale blue, passing into gray, the granulated appearance and hardness of the surface when cut, are indicative of scirrhus; whilst the unusual development of the fibrous deposit, and the osseous and cartilaginous changes indicate the character of the formation to be mixed, fibro-scirrhus.

Several points of interest, in addition to its great size, are connected with the history of this tumour. During the long continuance of its formation, (twelve years,) the patient does not seem to have suffered the violent pain so frequently attendant upon this class of affections: only slight œdema of the limbs resulted from the pressure of the tumour upon the abdominal arteries; the menstrual functions continued unaffected until a short time before death; and although the softening of the large tumour and the formation of purulent secretion were very great, yet no marked hectic was presented.

The singular character of these heterologous formations has engaged much of the attention of pathologists, and the cause of their production is yet but imperfectly understood. It would seem that the most satisfactory theory is, that the deposit is formed in the capillary system intermediate to the arteries and veins. In the present instance, we have seen that the carcinomatous formation was observed in the cellular tissue of the broad ligament, unconnected with any secreting glands. A question of great interest is presented respecting the circulation in these tu-

mours: by many it is thought that the small quantity of blood which permeates them, must be from the veins. This theory, Berard, in some very happy experiments on encephaloid formation, (detailed in *Dictionnaire de Medecine*, Art. *Cancer*.) disproves, showing it to be exclusively arterial, and that the veins become obliterated by the new formation obstructing their calibre. Anxious to ascertain whether any vessels entered into the scirrhus masses, repeated attempts at injecting them were made, in which I was very kindly and skilfully assisted by Dr. McKee, of North Carolina, resident physician. Unfortunately for a satisfactory result, the tumours had been removed sometime from the body previous to the attempt; every precaution, however, was taken to insure success, but we could not force a minute injection into the arteries further than a short distance beyond the capsule of the tumours, whilst the vessels seemed effectually closed by that tunic. The problem respecting the circulation through these formations is extremely interesting, and it is hoped that it will soon be satisfactorily elucidated.

Great pains were taken to inject the pedunculated tumour, supposing that its pedicle must contain blood-vessels for its nutrition. In this we were entirely unsuccessful; and, examining the stem by a microscope, we were convinced that it was a duplicature of the peritoneum, containing merely capillary vessels. We were induced, therefore, to regard the pedunculated tumours as resulting from a deposit in the cellular tissue beneath the peritoneum, which formation, by its growth, forms a mass, the weight of which carries before it a portion of the serous coat as one of its investing tunics, whilst the pedicle (a duplicature of peritoneum) is elongated in proportion to the increase of the tumour.

The diagnosis of the precise character of abdominal tumours connected with the uterus, is attended with much difficulty: so many of the physical characters are common to the form of tumours described in this case and to those of the ovaries, that the positive diagnosis would seem impossible. It has been supposed that in all cases of ovarian disease the menstrual function would be suppressed, and that the continuance of the catamenia would indicate that the tumour was unconnected with the ovaries; but numerous cases could be cited which entirely disprove that idea.

Among the more recent writers, the distinguished pathologist, Dr. Bright, reports several cases of ovarian tumours occurring under his own observation, where the catamenia regularly occurred at each monthly period. "No certainty," observes Dr. B., "is to be derived from this indication, as in ovarian disease the catamenia are sometimes regular, sometimes irregular, sometimes wanting; alteration in the mammæ are alike uncertain."*

The origin of these tumours from the pelvis generally distinguish them, at the commence-

* Guy's Hospital Report, 1838.

ment, from all other abdominal tumours, except those arising from the thickening of the coats of the bladder and the scirrhus affections of the uterus. In these cases, examination by the vagina must be called into requisition, and the central situation of these viscera, the peculiar hardening and irregularity of the uterus, are generally sufficient to indicate the organ affected. The tumours, when softened and admitting of fluctuation, or when the cysts in the ovaries are distended by fluid, may, of course, be distinguished from ascites, by their circumscribed extent.

The ultimate prognosis of the disease we have presented, is most unfavourable. Recurring to the paper of Dr. Bright, we find twenty-one cases of malignant ovarian tumour which terminated fatally. Of these, the immediate cause of death is given in fifteen instances; in two, death took place a short time after the development of the disease, from irritation, probably induced by the mechanical pressure of the tumour; in six cases, from inflammation, caused by paracentesis; four other cases where the malignant disease undermined the constitution, and gradually led to a fatal result; three, where internal rupture of the cysts occurred.

The duration of the disease is various, from a few months to fifteen or twenty years. As regards the *cure*, no flattering prospect can be presented. In the early stage of the disease, before the formation has attained a large size, occasional local depletion, by cups and leeches, the *careful* exhibition of iodine, with its combinations, together with its application by inunction—revulsives, rigid observations of all hygienic rules, “so as to maintain the general health in a state unfavourable to the rapid development of the disease,” are all that experience has taught us to expect from our remedies. The indication is, therefore, to restore and preserve the natural secretions, maintain the strength, and subdue inordinate action, whether local or general.

It is of the first importance that the patient should have the benefit of a pure atmosphere—crowded cities, and more especially the wards of hospitals, are objectionable. Of the therapeutic remedies calculated to effect the indication, and to relieve pain, irritation, and the harassing neuralgic and dyspeptic symptoms which are the general attendants upon the disease, may be mentioned, local application to the spine, either as counter-irritants or anodynes, and the exhibition, among others, of the bitter and mild tonics, alkalies, antacids, taraxicum, minute doses of the mercurials, sarsaparilla—the various narcotics, as conium, hyosciamus, stramonium, belladonna, opium, with the salts of morphia, whilst care must be taken to prevent constipation, by the administration of the mild laxatives.

By Dr. S. Young, of London,* pressure in cases of external scirrhus has been very highly recommended, and his views of its beneficial effects have been entirely confirmed by Recamier, one of the physicians of the Hotel Dieu of Paris. It

is impossible to produce much compression of internal abdominal scirrhus tumours, yet, relying on the authority of the distinguished names mentioned, it is proper that tight bandaging of the abdomen should be employed.

Of the internal remedies, Recamier* places his great reliance upon conium, the curative virtues of which greatly depend, he states, on the quantity of food consumed by the patient; that is to say, the operation of the remedy was much more marked when but a small quantity of food was allowed, whilst its effects were hardly perceptible when the quantity was considerable. Whilst using the conium, he therefore restricts his patients to a severe diet. The following are the principles of his treatment:†

1st. The patient takes a dose of the extract of conium,‡ evening and morning, two hours before the first, and two hours before the last meal. The amount of the first dose is half a grain, which is gradually increased to six grains each time. This dose is continued for a fortnight, in order that the organs may become habituated to its operation, and is afterwards increased to twelve grains each time, beyond which it is not necessary to carry the remedy, as its influence is then sufficient. The twelve-grain dose is continued from two to three or four weeks.

2d. After each dose of the conium, as well as at meals, the patient uses a decoction of sarsaparilla, (composed of two ounces of the root to two pounds of water,) instead of water.

3d. Only the third of the ordinary quantity of food is allowed, which ought to be very simple, and divided into three small meals.

4th. If the conium disagree in one form, it should be given in another, or the aconitum may be used instead, but in lesser quantity than the conium. Towards the end of the treatment, the dose of the conium is gradually diminished and the diet gradually increased.

By these remedies, judiciously employed, M. Recamier states his success in cancer to have been very satisfactory. In this he has been more fortunate than most physicians have been in their treatment of the malignant abdominal tumours connected with the uterus: generally, all they effect is, to retard the progress of the disease, render it stationary for a time, but sooner or later it recurs with renewed violence and goes rapidly forward.

When the disease has advanced to softening, and the fluctuation is distinctly felt, paracentesis

* Recherches sur le traitement de Cancer, par M. Recamier.

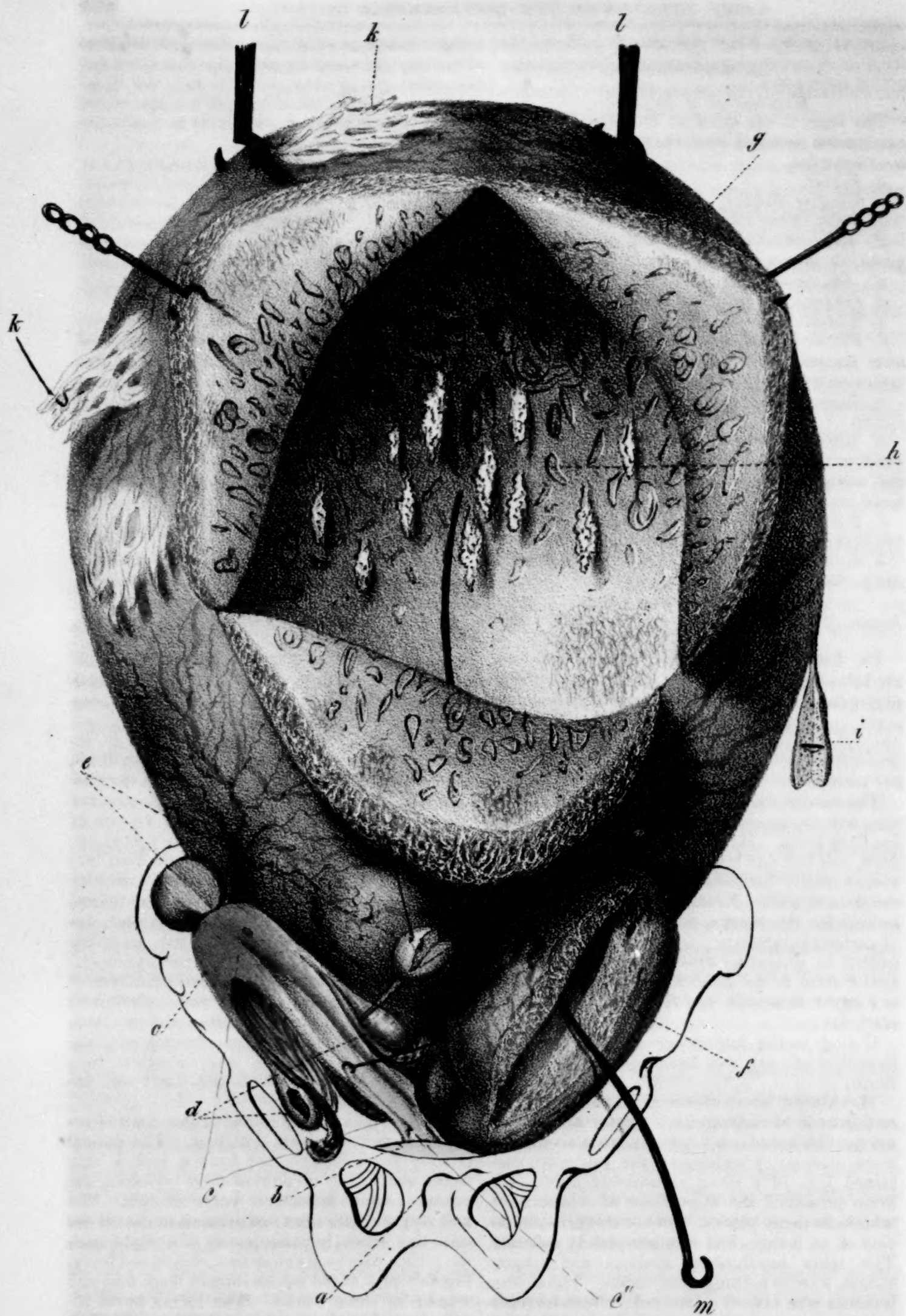
† Cyclopaedia of Practical Medicine, Art. Scirrhus.

‡ M. Recamier prepares the extract of conium in the following manner, and to the excellence of the preparation he ascribes much of his success. “The plant is submitted to the action of the vapour of vinegar or alcohol, before the juice is expressed from it; the juice is afterwards exposed to the heat of a sand-bath, and evaporated to the consistence of an extract. The extract thus obtained has not the nauseous odour of that usually employed, whilst it possesses all the deobstruent virtues, and sits better on the stomach than the latter.”

* Cases of Cancer, &c., London, 1816.

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Drawn from Nature and on Stone by J. Collins

is recommended, which operation is performed in the hope of prolonging life—cure in this case cannot be anticipated.

Explanation of the Plate.

The tumour, one third of the natural size, is represented as raised upwards from the pelvis, by the hooks *l, l*.

- a.* Pelvis.
- b.* Urinary bladder.
- c.* Body of the uterus.
- c'.* Neck of the uterus, which is much elongated, (5 inches.)
- c''.* Os tincæ.
- d.* Ovaries and fallopian tubes.
- e.* Tumours, sessile and pedunculated.
- f.* Fibro-scirrhous tumour, connected with the large tumour, *g*, with which it communicates, as indicated by the wire *m*.
- g.* Large tumour laid open by a triangular incision.
- h.* Internal surface, very irregular from the pendant scirrhus masses and numerous cells in the walls of the tumour—on the smoother portions are patches of arterial capillaries.
- i.* Fibrous pedunculated tumour, composed principally of ossific deposit.
- k, k.* Membranous bands passing to omentum and peritoneum of contiguous organs.

Report of Cases treated in the Philadelphia Dispensary, for June, 1839.

Dr. Knight reports, of abortion one case, chronic bronchitis one, contusion one, dysentery four, erysipelas one, intermittent fever one, remittent fever four, gastritis one, chronic hydrocephalus one, ophthalmia two, wound of scalp one, worms one—nineteen cures, one death—nine remain under treatment.

The case of death reported, occurred in a child who was represented as having had hydrocephalus from birth. He had been unwell for several days, and had had convulsions the evening previous to call. Strabismus first supervened about the time of call. Nothing had passed from the bowels for two weeks, notwithstanding the use of various purgatives. Croton oil, however, succeeded in procuring stools. Leeches and cold applications to the head were used, but without any apparent benefit, and the patient died on the sixth day.

Owing to the impatience of friends, only an imperfect autopsy was made sixteen hours after death.

Head large; bones of cranium not separated, but so thin as to be diaphanous. The meninges were neither thickened nor injected; the convolutions were completely unfolded; the ventricles contained $\frac{3}{4}$ of a clear, transparent fluid. The brain presented the appearance of a membrane, which, in many places, was not thicker than the rind of an orange, and was completely softened. The tenia semilunaris, thalami and corpora striata, were in nothing remarkable. The septum lucidum was almost destroyed. Notwithstanding the enormous effusion, and the almost membranous expansion of the brain, the patient's in-

telligence was as good as is usual with children of his age. It would hence appear that mechanical causes, giving an unnatural form to the brain, do not necessarily interfere with the operations of the mind, provided the deformity be gradually induced.

Dr. Evans reports one case of bronchitis, one of cholera morbus, one of chorea, five of diarrhœa, two of dysentery, one of dyspepsia, one of intermittent fever, one of nebula, two of phthisis, one of pneumonia, one of prolapsus uteri, two of scarlatina, one of worms—20 cases—fifteen cured, three died, (two of phthisis, one of diarrhœa,) three sent to hospital.

Dr. Patterson reports one mammary abscess, one asthma relieved, one apthæ, one cynanche tonsilaris, two cholera infantum, (one died,) two dysentery, five diarrhœa, (one died,) one dyspepsia, one dentition, one delirium tremens, one bilious fever, two remittent fever, two gastritis, (one died, one sent to hospital,) one hepatitis, one hydrocephalus, (died,) one laryngitis, one marasmus, (died,) one metritis, one neuralgia, six pertussis, two phthisis, (one died, one relieved,) one procidentia uteri, (relieved,) two rheumatism, one sprain, one scarlatina, one enlarged tonsils, one ulcer—forty-two cases—thirty-two cured, three relieved, one sent to hospital, and six died.

Dr. Boyer reports one bronchitis, one cachexia, one catarrh, two cephalalgia, one cholera infantum, one concussion of brain, one colic, one diarrhœa, one dysentery, five remittent fever, one hydrarthrosis, one ophthalmia, one pleurisy, one prolapsus ani, three rheumatism—twenty-two cases—twenty cured, one relieved, and one removed. Besides these, there were sixty-three cases prescribed for during the month at the consultation office of the dispensary—twenty-five males, and thirty-eight females—the results of which are unknown. The diagnosis was as follows: chronic bronchitis two, catarrh two, cephalalgia three, cholera morbus two, cholera infantum one, constipation three, contusion three, dentition one, diarrhœa two, dyspepsia four, dysentery one, dysury one, enuresis one, ganglion one, gastralgia one, hæmorrhoids one, hydropericarditis one, leucorrhœa one, derangements of menstruation three, neuralgia one, ophthalmia three, otitis one, pertussis three, pleurisy one, pregnancy one, psoriasis one, rheumatism, enlargement of the spleen one, scrofula two, tinia capitis three, tonsillitis one, ulcer one, vomiting one, worms one.

The previous history of one of the cases of cephalalgia may be worth detailing. The patient is forty years of age, has been a widow nine years, and is the mother of three children, the youngest about seventeen years of age. She was very well after her last accouchement till the third day, when, in consequence of a slight cold, the lochia, previously abundant, ceased suddenly. She felt only slight inconvenience from this, and was up in three weeks. The lochia never returned, nor has she menstruated since. She has no leucorrhœa, either constant or periodical, no

symptoms of prolapsus, no vicarious discharge, nor has her health been otherwise disturbed than by a headach recurring without regularity, and accompanied with nausea, and vomiting of a glairy mucous. It is readily amenable to treatment, yielding generally within twelve hours.

The point of interest here is the cessation of the menses at the early age of twenty-three, one year sooner than in any of the cases recorded by Velpeau.

FOREIGN CORRESPONDENCE.

LETTER FROM DR. VERNON. No. II.

PARIS, May 20th, 1839.

To the Editors of the Medical Examiner.

AFTER an atmosphere of violent and protracted storms, the medical horizon has cleared up, and resumed its ordinary color. The Academy, where tumult, and passion, and, at times, eloquence so lately prevailed, in the midst of the discussion on the motor and sensitive nerves, is now observing its classic silence; and, unfortunately, from the shock of so many conflicting opinions, light has not broken forth. The Academy of Medicine, as it is at present constituted, is, perhaps, the worst constituted body to advance the interests of science. There every one, enlightened or not upon the nature of the question, feels called upon to utter his opinion, and give the results of his long experience; and the discussions, thus interfered with, degenerate into idle declamations, if, indeed, they do not end in personal disputations, disgraceful to the combatants, and unworthy the gravity of an Academy. A fruitful field for such discussions has offered itself for some time past—the subject of poisonous and arsenious acid, the discussion on the functions of the nerves, the election of a member in the section of anatomy and physiology, (which resulted in the choice of an orthopedist,) all these were admissible topics for the eloquence of the illustrious members. The Academy is, for the time, in a state of repose. We must, therefore, elsewhere seek a subject of our letter. We should have wished to speak of the *concours* of the Faculty of Medicine, but the echo of its amphitheatres has ceased to be heard. The competitors, in the retirement of the closet, devoting all their energies to the working out of that which chance has allotted them. In this allotment, as in all matters the subject of hazard, both good and bad subjects are to be found. By the side of questions involving enlarged novel views, and full of interest, are to be found topics dry, empty, and nearly barren of interest. We shall devote a special letter to the study of this

clinical trial, which will probably be rendered not a little curious and brilliant.

But, beyond the limits of the Academy and School, are to be found other (we were going to say, the great body of) zealous and industrious workers, full of devotion to science and the progress of medicine. The hospitals shall afford us an example. M. Piorry, well known for his labours in semeiology, and his lately published system of the classification and denomination of diseases, a few days since opened his clinique at the hospital of La Pitié. This year he proposes, in his lectures, to follow the subject of diseases of the blood. It is useless to remind all who have kept pace with the progress of the science, the difficulties of this topic, and the dearth of clinical labours upon the subject. There are, therefore, evinced both devotion and medical tact in the pursuit of such investigations. Undoubtedly chemistry, physics, and the microscope, have shed some light upon the subject: we are all familiar with the researches of M. Lecann, of M. Herraut, (d'Alfort, of MM. Bouillaud, Donne, Mault, &c. But there is a wide distance between the knowledge of facts, developed by these inquiries, and such as are demanded by practical medicine. How often does theory fail us at the bedside of the patient! And how few are the observations which point out clearly the connection between an alteration in the constitution of the blood, and the well-marked symptoms of any disease? It is to the establishment of this important relation, by ascertaining the elements of its composition, from the observation of the minutest clinical facts, that M. Piorry means to devote his summer tour of duty. As an appropriate introduction to the future details on this subject, which we may gather from the instruction of M. Piorry, I propose to offer you a succinct analysis of a work on the same subject, of no great celebrity, though well entitled to it, both from the novel manner in which the lesions of the blood are treated of, and the equally novel therapeutic precepts deduced therefrom. I allude to the work of M. Denis de Commercay, entitled, "An Essay on the Application of Organic Chemistry, to the Physiological Study of the Blood of Man, and to the Physiologico-Pathological, Hygienic, and Therapeutic Study of the Diseases of this Fluid."

It is by the application of the chemical results obtained in the laboratory that M. Denis attempts to illustrate the mechanism of the vital organization.

He recognises but a single order of phenomena in the universe, and this order is governed by general laws which are common to all bodies, whether inert or animated. The latter, without doubt, owe their life to a principle, which may be called vital, but whose sole action is that of exciting, of directing, in the body animated by it, the physical and chemical powers inherent in matter, without deranging or changing the nature of their effects.

As regards the special laws of this principle, they belong to the domain of psychology and metaphysics; so that positive physiology, according to M. Denis, rests exclusively upon the data furnished by physics and chemistry.

Since the extinction of vitality does not produce instant modification in organised matter,—for the dead body may be looked upon as a machine merely in repose, which a moment before was in the full exercise of its functions and still preserving the combination of wheels and springs so lately active, and is deficient only in the secret cause of their harmonious movement, the ensemble of the products of physical and chemical decomposition, artificially induced, may, according to M. Denis, be regarded as the exact representation of the material state of life; and we may safely admit that death does not rob the tissues and humours of those chemical properties, which, when exercised under the influence of vitality, gave rise to the various organic functions.

Hence it follows that chemical research alone can enable us to unravel the intricacies of organization and instruct us in those subtle reactions which are constantly going on during the existence of the animated being.

Consonantly, then, with these views, physiology, the knowledge of the physical structure and chemical composition of organs and humours, as well as the physical and chemical effects apparent in each individual, must be deferred so long as these effects are brought about through the influence of vitality.

Pathology and Therapeutics, therefore, would have for the objects of their study, the former, instruments and various physico-chemical reaction, the latter, the rectification of these instruments through physico-chemical means.

After setting forth this doctrine, which we do not pretend to defend in every particular, M. Denis, in the first part of his essays, gives himself up to chemical researches in the human blood. Having this object ever in view, he examines successively the substances which enter into the

composition of the blood, and the processes employed for their elimination, as merely for determining in an analysis those which may be considered as immediate constituents. These researches are purely chemical.

Let us observe, that M. Denis demonstrates in them that fibrine and albumen are one and the same thing; that the salts of the blood perform a most important office in this humour and in the organs; that the yellow biliary matter evident in the fluids and tissues of those labouring under jaundice, exists also in healthy blood; that the globules of the blood have an albuminous nucleus, etc.

This part terminates with an exposition of the method of analysing the blood.

The second contains deductions furnished by the preceding researches.

The author first determines what the composition of the blood in a healthy individual should be, and establishes the theory of molecular phenomena which take place in it during the exercise of the function.

To this end he gives the analysis of the globules and serum. He finds that the varieties of healthy blood result from the mixture of these in different proportions; that the globules and serum have a respectively identical composition.

He follows them into the body, and infers, from reactions studied in the laboratory, those which their constituent substances should have in the living economy.

Thus much for physiology.

In continuation, M. Denis enters upon a similar investigation into unhealthy blood. After a comprehensive glance at the affections of this fluid, he gives the composition of the buffy, and of the tarry blood, of the incoagulable, of the thick, the watery, the blood of jaundiced subjects, blood with colourless serum, of white blood, and of the blood of those affected with cholera.

The greater part of the facts which show their composition have been developed by M. Denis, and form a series of discoveries *most interesting for science*.

The examination of the phenomena which seem to result from an alteration of the blood, leads the author to considerations on the formation of the buffy coat which occasionally covers the blood, on croup, typhoid affections, scurvy, plethora, anemia, jaundice, and cholera.

Then follow some very ingenious therapeutic deductions regarding the employment of means calculated to maintain the blood in its normal

state, and on the rational treatment which chemical researches should induce us to adopt in diseases depending on an altered state of the fluid.

From this brief analysis may readily be conceived the importance of M. Denis's labours, and of what utility the perusal and study of these investigations will be to those who wish seriously to inquire into the lesions of the blood, and into the means for remedying them.

BIBLIOGRAPHICAL NOTICE.

Researches on the Tubercular Disease of the Bones.

By A. NELATON, M. D. Translated from the French, by CHARLES R. KING, M. D.

THE Children's Hospital of Paris is the grand receptacle for the scrofulous children of the poorer inhabitants of Paris. The porters, the inhabitants of the dark and damp dwellings of the cit , and of the Faubourgs St. Victor and St. Marceau, are cooped up in unwholesome dwellings, with little light and air, and food of the poorest quality; a necessary consequence is, that numbers of their children are attacked with scrofulous caries of the bones. During our residence at Paris we observed many dissections of these diseased bones at the Children's Hospital, made by Dr. Rufz, now of Martinique; these dissections showed that scrofulous caries of the bones might be considered nearly, if not quite identical with tuberculous diseases. Softening of the tuberculous matter takes place in the usual way, and caries results.

Dr. Nelaton succeeded Dr. Rufz as interne in the surgical service of the hospital, and prosecuted still further the examination of the subject. The results which he obtained were published, and we are indebted to Dr. King, of New York, for the translation of Dr. Nelaton's memoir.

We extract the more interesting parts of Dr. Nelaton's memoir. One remark we may make, is, that all these diseases are much more fatal at the Children's Hospital than at other institutions, owing to the peculiar constitution of the patients, and, perhaps, the vitiation of the air, caused by the large number of children there collected, notwithstanding the scrupulous cleanliness of the institution.

The following table, in which I have brought together the principal traits of each of these two forms of tubercular disease in their order of succession, will serve as a summary of what has been previously said, and place in bold relief the differences between them.

ENCYSTED TUBERCLES.

- 1st. Semi-transparent gray granulations.
- 2d. Crude, opaque and encysted tubercle.
- 3d. Bony excavation, loss of substance in that tissue.
- 4th. Evacuation of the tubercular cavity.
- 6th. Hypertrophy of the cyst, obliteration of the cavity, recovery.

In this table I have represented only the most simple march of the disease, and the termination towards which it appears naturally to tend. But it has already been seen, and will be still more evident in the second part of this work, how local and accidental circumstances may interfere with this favourable result.

TUBERCULAR INFILTRATION.

- 1st. Semi-transparent gray infiltration.
- 2d. Interstitial hypertrophy of the bony tissue.
- 3d. Puriform infiltration.
- 4th. Necrosis of the infiltrated portion.
- 5th. Sequestration. Foreign body.

It may cause a little surprise to find in the preceding table the interstitial hypertrophy of the bony tissue placed between the semi-transparent gray infiltration and the puriform; my intention is by it to indicate that I consider the hypertrophy as an intermediate phenomenon between these two states, a phenomenon which manifests itself during the passage from the first to the second degree; for we have seen that this hypertrophy does not exist during the first period, while it cannot be admitted to take place during the second, when the bony tissue is deprived of its elements of nutrition and of life.

From what has been said, it is clear that the first variety of the tubercular disease could not be confounded with any other affection of the bony tissues; that it has its peculiar march and physiognomy, and affords but very distant analogies with the other organic lesions of this tissue. As to the second variety, it is not at all astonishing that it has been so long, and is still daily, confounded with caries; a mistake arising from the want of positive precision as to the anatomical character of caries, and from the fact that under this name very different pathological conditions are described. Besides, it must be allowed, that a portion of cellular tissue infiltrated with softened tubercular matter has, indeed, some resemblance in aspect to a carious portion; but it will always be easy to recognise the puriform tubercular infiltration by the interstitial hypertrophy, by the augmentation of solidity, and by the absence of vascularity; whilst in caries, properly so called, there is a rarefaction, a softening, and an increased vascularity of the bony tissue. Consequently, they are distinguished by organic conditions, not only differing from, but directly opposed to, each other. Caries always proceeds from the circumference to the centre of the bone; the tubercular disease from the centre to the circumference. Nothing would be more easy than to accumulate points of distinction between these two diseases; but I think enough has been said to avoid confounding them.

It is much more easy to understand its being mistaken for a simple necrosis; but, in a given case, the nature of the organic lesion will be easily determined, by recollecting that simple necrosis does not cause any modification of the intimate structure of the dead tissue, whilst the tubercular infiltration causes before-hand an interstitial hypertrophy.

There is still another pathological condition of the bones with which tubercular infiltration is confounded; I refer to the suppuration of that tissue, a disease described under the name of inflammation of the medullary membrane of the bones; the interstitial hypertrophy will suffice here, also, to prevent the mistake.

SEAT OF THE TUBERCULAR DISEASE.

Although I have not treated separately of the seat of the two varieties of this disease, it will be easy to recognise, from the data we have passed in review, what is common to both, and what is peculiar to one or the other. All parts of the bony system are not equally liable to its attack; it may indeed be said, in a general manner, that it develops itself almost always in the spongy tissue of the bones. But we must remark here, that the spongy tissues of the bones, in an adult, presents itself under two different conditions, which may be designated by the names of *adipose* cellular tissue, and of *vascular, bloody*, or simply *red* cellular tissue. The first variety constitutes the extremities of the long bones and the short bones of the limbs. All the bones of the trunk are formed of the second; to ascertain this difference, it is only necessary to compare the spongy tissue of one of the condyles of the femur with that of the body of a vertebra in the adult. In the first, the meshes are filled with a yellow, adipose matter; while the cells of the body of the vertebrae are composed of an extremely vascular red substance, presenting scarcely any trace of fatty matter; now, it is in this second variety of the cellular tissues of the bones that the tubercular productions are almost exclusively developed. In children, as this difference in the tissues does not exist, and as the bones of the limbs, as well as those of the trunk, are all formed of this red cellular tissue, the tubercular disease attacks indifferently the bones of the limbs and of the trunk; in the adult, on the contrary, it is met with only in the bones of the trunk. This law admits of but very few exceptions; these too could perhaps be explained by the fact of a tardy transformation of the red cellular tissue into the adipose. It is in the very centre of the bony tissue, rather than at its surface, that this disease originates; a fact more easily ascertained in the case of encysted tubercles than in that of tubercular infiltration, which being ordinarily diffused, speedily reaches the surface of the bone. In the long bones, the extremities are the most usual seat of tubercles; and it has appeared to me, that they are more frequently developed in the epiphysis than in the contiguous and enlarged extremity of the diaphysis. Still, I have met with some cases, rare, it is true, of encysted tubercles

lodged in the compact tissue of the diaphysis; but I could not affirm that the accidental production was not developed in the medullary tissue, and that the destruction of the compact tissue was not consecutive. In the long bones, one extremity is generally attacked in preference to the other; thus in the femur, it is the inferior extremity; the contrary is the case with the tibia; in the humerus and the bones of the fore-arm, the cubital extremity is most generally affected.

This organic lesion has been observed in almost every bone of the skeleton; the following classification will indicate the order of frequency in each of them:

- 1st. Vertebrae;
- 2d. Tibia, femur, humerus, (in children;)
- 3d. Phalanges, metatarsal metacarpal bones;
- 4th. Sternum and ribs, iliac bones;
- 5th. Petrous portion of the temporal bone;
- 6th. Short bones of the tarsus and of the carpus.

The bones not mentioned in this table should be classed with those with which they have the greatest analogy of form and structure.

From the preceding data, we may conclude that the two varieties of the tubercular disease of the vertebrae differ in a marked manner from each other, in respect to their essential characteristics, and in respect to their severity. The first alone seems to me susceptible of cure; the second is always incurable, because it generally attacks a greater extent of the vertebral column, and especially, on account of the sequestra, veritable foreign bodies, which keep up a deep and inexhaustible suppuration. It will now be seen at once, how we explain that opinion, which at first appeared a true surgical paradox, namely: that the profound caries is alone susceptible of cure, while superficial caries is ordinarily incurable. The first announces itself by a gibbosity, which appears sometimes suddenly, but always very rapidly; the second by a deformity that manifests itself only after some time, and in an insensible manner. Thus, all other things being equal, the sudden appearance of a gibbosity, in a case of vertebral disease, should be considered rather a fortunate than an unfavourable circumstance; for it is, in our estimation, the indication of the existence of the first form of this affection, which alone, as we have said, is susceptible of cure.

Tubercles in the articular extremities of the long bones.—The tubercular disease seated in the spongy extremities of the long bones, and consequently in the vicinity of the articulations, gives rise to various pathological phenomena, generally comprehended under the denomination of white-swelling. These phenomena should be separately studied in each of the two varieties of the tubercular disease of the bones. I will not here speak of the secondary symptoms of these white-swelling, such as pain, engorgement of the tissues surrounding the articulation, tubercular abscesses, and the fistula succeeding them; they would belong to a complete history of the tubercular white-swelling; I shall dwell solely upon two points which may be considered as characterizing these two varieties.

When an encysted tubercle is developed in the extremity of a long bone, it is at first enclosed in the middle of the spongy tissue of the bone, at a small distance from the articular cavity; it increases in all directions, and gradually approaches, on the one side, the articular cavity, and on the other, the periphery of the bone situated outside of the articulation. If, in the progress of development, it reaches more quickly the surface outside of the articulation, it empties itself into the neighbouring cellular tissue; an abscess forms there, grows and opens, and is followed by a fistula; the tubercular cyst becomes hypertrophied, the cavity in the bone is filled up, and a spontaneous cure is common in this case. But if, on the contrary, the tubercle first reaches the articulation, either because it has commenced at but a little distance from it, or because the new bony layers, accumulating where the bone is covered by its periosteum, cause the constant retrogradation, so to speak, of the periphery of the bone, the diarthrodial cartilage is perforated, the tubercular matter is effused into the articulation, and suddenly occasions an intense arthritis, which is accompanied with the most serious local and general symptoms, and may be followed by an almost certain disorganization of all parts of the articulation."—*N. Y. Journ. of Med. & Surg.*

THE MEDICAL EXAMINER.

PHILADELPHIA, JULY 27, 1839.

WE publish in this number an interesting case of cancerous disease, illustrated by a coloured lithograph, for which our readers are indebted to the liberality of Dr. Pennock. Details of cases which terminate fatally are regarded by some physicians as matters of little interest, and as useless, at least, to the great majority of practitioners. This is taking a narrow view of the subject: no description of pathological appearances is wanting in interest if it be connected with the symptoms observed during life, or with the pathological relations existing between the appearances in question and other cases of disease. Even in cancerous diseases, which are confessedly obscure, and deprived of evident symptoms, it is interesting and useful to trace the mode of development of the morbid tissue, and its connection with a general disorder of the economy. A reflecting mind is never at loss in turning such facts to a useful account, not merely as illustrating questions of abstract scientific interest, but in one way or another conducing to the improvement of the therapeutic art.

We shall continue, therefore, to lay quite as much stress on cases which terminate fatally, as on those which end by the recovery of the pa-

tient, persuaded that at least as much will be gained by the study of the former as of the latter class of observations.

DOMESTIC SUMMARY.

THE LATE NAVAL EXAMINATION.

Navy Department, July 19th, 1839.

The Board of Naval Surgeons, recently convened in Philadelphia, terminated its proceedings on the 12th inst.

The following assistant surgeons were examined, and found qualified for promotion: D. C. McLeod, to retain his original position on the register, next below J. A. Lockwood; Ninian Pinckney, Robert T. Barry, Geo. W. Peete, to retain their relative position on the register.

The following candidates for admission into the Navy, were passed in the order, as to relative merit, here stated:—1. John O'Connor Barclay. 2. J. B. Gould. 3. Chas. H. Wheelwright. 4. R. W. Jefferey. 5. Thos. M. Potter. 6. Wm. A. Nelson. 7. G. G. Wilson. 8. J. H. Wright. 9. N. T. H. Moore. 10. Jos. Hopkinson. 11. Jno. Thornley. 12. Danl. L. Bryan.

FOREIGN SUMMARY.

Clinical Lecture on Chronic Rheumatism. By ROBERT CARSWELL, M.D.—Gentlemen: I have, to-day, to lay before you an account of cases which have terminated fatally since we last met, both of which present themselves to our consideration in several important points of view. The first was a case of chronic rheumatism, that of Anne King, which I laid before you on a former occasion, and which has afforded us an interesting example of that mode in which rheumatism sometimes terminates fatally, viz., by metastasis to an important internal organ.

The second case to which I have to request your attention, and which I also laid before you on a former occasion, is that of James Shirley, than which it would be difficult to meet with a more striking example of what has been denominated *acute phthisis*, the disease having passed through its successive stages in a period of about four months from the first occurrence of the cough, and in about two months and a half after the first appearance of hæmoptysis; and that, too, in a man who stated that he never had a day's illness before the commencement of the attack which compelled him to seek for relief in this hospital. And not only is this case interesting as regards the rapidity of its progress, but it is equally so from its occurring in a man of great muscular power, having a well-formed and capacious chest, and with no apparent hereditary disposition to the disease. It may, therefore, also be considered as strikingly illustrative of that form of tubercular phthisis denominated *acquired*, in contradistinction to that which is *hereditary*, or transmitted from parents to their offspring. But let us advert to the first case, that of Anne King, ætat 45, who was admitted on the 18th December.

I shall first notice the principal facts of the case, formerly stated to you in detail, and afterwards the most important of those which have since occurred. About two years ago this patient, after getting wet, had rheumatism of the hands and knees, since which time to her admission she never had been altogether free from it. On the contrary, it had been gradually aggravated during the previous eight months. When admitted she complained of gnawing pain in the hands and knees, greatly increased by pressure; the hands were swollen; the fingers flexed, and not extensible; effusion in the knee-joints, especially in the left knee, and both legs flexed and incapable of extension. The pains were somewhat relieved by heat, and increased by cold. There was hot and dry skin; a white but moist tongue; the pulse 80, and regular. The patient was lean and much debilitated.

From this general statement of the case you will perceive that it was one of chronic rheumatism, and of the asthenic character, cold rheumatism, or arthrodynia, the joints being the parts principally affected; the pain being rather relieved than otherwise by heat; and there being little or no febrile excitement.

The treatment adopted consisted in the internal administration of the iodide of potassium, and which, in the course of about a fortnight, the patient then taking a drachm of the solution daily, was followed by considerable improvement, which continued for two weeks longer. At this time, however, the pains became worse, varying much with the state of the weather. She then took the ammoniated tincture of guaiacum, and had sinapisms frequently applied to the knees. This treatment seemed to benefit her for a short time only; the pains again became worse, her general health was less satisfactory, her appetite failed, and she complained much of weakness. The sulphate of cinchonine was then given, with considerable improvement of her general health and strength, and the pain and swelling of the knees diminished under the constant application of poultices, which afforded her more relief than the sinapisms. An unfavourable change, however, induced us again to return to the use of the iodide of potassium, but at the end of a week it was omitted, in consequence of the supervention of febrile symptoms, viz., a quick, hard pulse, considerable heat of skin, sickness, the pains in the knees, too, having considerably increased. These febrile symptoms, however, subsided in the course of two or three days, and permitted us to resume the iodide of potassium, which was again followed by considerable improvement in the space of three days. She complained of little pain in the knees, except when pressed, and they were considerably diminished in size. Her general health, too, was also much improved, and she expressed herself as feeling altogether much better. On the following day, however, a remarkable change for the worse was observed to have taken place. This was on the 3d of March, about two months and

a half after her admission. On that day she awoke out of a profound sleep unconscious of where she was, and with no recollection of persons about her. From this state she recovered towards evening, but became delirious during the night. In the morning of the following day the countenance was livid; there was constant muttering and defective articulation; great heat and dryness of the skin; pulse 155, small and weak. The head was not hotter than the other parts of the body. She had no knowledge of persons, and was constantly picking the bed-clothes. Here, indeed, was a remarkable change in the state of the patient, and in the character of the disease, in the space of little more than a day. Marked symptoms of phrenitis had supervened during this space of time, and at a period, too, you will observe, when the local affection had undergone considerable improvement. The patient, as I have said, complained of much less pain in the knees, nor was the pain nearly so much increased by pressure as on the preceding days. The bulk of the knees had also considerably diminished, and the general health improved, up to the day preceding that on which the head affection supervened. Such a sudden and marked change, coupled with the previous amelioration of the chronic local affection, and without any obvious exciting cause, naturally suggested the idea of the occurrence of metastasis, of rheumatic phrenitis, or rheumatic inflammation of the membranes of the brain.

Means were immediately adopted to combat this new and formidable affection. The head was shaved, cold lotions applied to the scalp, and a blister to the nape of the neck. On the following day, and acting on the principle of the disease being of a metastatic nature, blisters were ordered to the knees, or the primary seat of the disease, with the view of exciting anew, or increasing the inflammation in these parts; and to co-operate with this means, and increase its effect, sinapisms were also ordered to be applied to the legs, with the administration of the terebinthinate enema. No benefit, however, followed the use of these measures. The patient died the next day, the fourth day after the commencement of the attack.

I have said that the absence of any exciting cause of the phrenitis in this case, along with the disappearance, as it were, of the rheumatic affection of the knees, were considered by us as sufficient grounds for regarding metastasis to have occurred. Nor does there appear any reason since for supposing that this opinion was ill-founded. The occurrence of metastasis is far from being uncommon (whatever meaning may be attached to this term;) more so, certainly, in gout than in rheumatism; but of the latter numerous cases are recorded of its occurrence in various organs, especially in the heart, stomach, and brain, and of its terminating fatally in persons debilitated by the primary chronic affection alone, or in connection with other deteriorated conditions of the body.

I must not omit, however, to state to you, that

our patient seems to have been exposed to a strong predisposing, if not exciting cause of the cerebral affection under which she sank so rapidly. We have been informed that on one or more occasions previous to her attack, she was visited by some itinerant methodist preachers, who had been admitted at the desire of another patient in the same ward; and afterwards a visible alteration was observed to have taken place in her manners, feelings, and sentiments. During her delirium, or on recovering from this state, she expressed herself in language indicative of mental suffering and anxiety, and something like fearful forebodings of punishment for sins with the commission of which she had probably been accused by these too often uncharitable, and not always judicious, visitors of the sick poor of hospitals.

But, however this may be, such was the state of mind of the patient after the interview to which I have alluded, and it is easy to conceive how much the organ thus affected must have been disposed to participate in the morbid condition so long localised in other parts of the body.

The morbid appearances found after death were extremely interesting, as affording us positive evidence of the nature, not only of the chronic disease,—the rheumatism,—from which the patient had so long suffered, but also of that which was the immediate cause of death. Independently of a certain degree of general congestion of the brain, as seen by a greater quantity of blood than usual issuing from the divided vessels in the substance of the brain, together with œdema of the same, and the effusion of serosity into the ventricles; independently of these morbid appearances, I say, there was marked inflammation of the membranes of the brain, more particularly on the *upper portions* of the hemispheres. This consisted in rose-red patches of various sizes, formed by the accumulation of blood in the minute arterial divisions, constituting the capillary congestion of acute inflammation. There was no lymph or pus effused; no opacity of the membranes; hardly any softening of these, and no perceptible alteration of the cortical substance of the brain, contiguous to them. The inflammatory appearances were, in fact, confined to the membranes. It was a case of *phrenitis*, in the strictest sense of the term, and, moreover, of *acute phrenitis*, terminating fatally in the active or early stage; and it destroyed life in this patient the more readily and rapidly that she possessed little bodily energy; her constitution generally, a small amount of reaction; and that the effected organ, in particular, was already in a state of exhaustion from the cause to which I have alluded, before it was submitted to the morbid stimulus of the disease under the influence of which it was deprived of its vitality. And here I may remark, whilst I trust you will not accuse me of indulging in fanciful hypothesis, that the situations of the brain in which the inflammation was most marked, were those in which phrenologists have placed those faculties of the mind which we call *veneration*, *hope*, and *conscientiousness*. Whether these faculties were

highly developed or not in this patient I know not, nor could I, had I examined the cranium, have satisfied myself on this point, having neither a theoretical nor practical knowledge of phrenology. However, the fact is as I have stated it. The pathological condition of the membranes of the brain was most conspicuous in the situations which I have named, and if the leading doctrines of phrenology be well founded, it would neither be irrational nor unphilosophical to admit the influence of the moral agency which was exercised on the mind of this patient, and more especially on those individual portions or faculties of it which direct us in the discharge of our religious and moral obligations; and hence it would follow that these having been called into a state of inordinate activity, must, according to the laws of morbid as well as healthy action, have passed into an opposite state, a state of languor or exhaustion, whence might be explained the intellectual derangement and despondency which characterized the cerebral affection in this case.

But I shall not trespass further on your time on a subject of this nature, and concerning which I know so little. I have mentioned it in connection with the anatomico-pathological facts of the case, and the probable origin of the cause in which the disease seemed to have originated.

We now come to a more positive, and therefore more satisfactory part of the case, viz., the diseased appearances found in the principal seat of the rheumatic affection, the knee-joints. They corresponded, in all respects, with those alterations of the joints which, on several occasions, I have had an opportunity of observing after repeated and long-continued attacks of the rheumatism. The cartilages of both knee-joints were extensively destroyed, the articular surfaces of the bones consequently denuded, and in some parts united to each other, or ankylosed. The surfaces in this state were more or less spongy, softened, of a bright red colour, and in contact with a false cellulo-vascular membrane, of the same red colour, attached to the patella or anterior surface of the joint. The union between certain portions of the surface of the joint, and where the cartilages were destroyed, was pretty intimate, and was broken when the knee was bent after laying open the articular cavity.

All the appearances were those commonly met with in subacute chronic inflammation of long duration, and were such as afforded a satisfactory explanation of the obstinacy of the case, and the partial benefit obtained by the means employed either locally or generally. It is probable, had the patient lived, that the disease would have terminated in complete and permanent ankylosis of the joints.

I believe that none other of the joints that were affected with the disease were examined; nor were there any other morbid appearances observed bearing any relation to the history of the case.

—
Clinical Lecture, (second,) on Pulmonary Consumption.—I have already noticed, generally, the interesting character of the second case which I

laid before you on a former occasion. The more important circumstances which I then related, together with the principal phenomena of the disease up to its fatal termination, I shall now recall to your recollection, and enumerate. This patient, James Shirley, æt. 36, entered the hospital the 30th of January. Although he had enjoyed good health up to a period of two months and a half before his admission, the disease had already arrived at the commencement of the second stage; that is to say, the commencement of softening of the tuberculous matter, and the formation of tubercular excavations, had already taken place.

Cough, from exposure to cold, was the first symptom of the disease, and this was followed by frequent and repeated attacks of hæmoptysis, at short intervals of time, and considerable loss of flesh and strength.

At the time of his admission the cough was severe, accompanied by copious expectoration of a thick, greenish-yellow-coloured tenacious mucus, sometimes tinged with blood. Sonorous and sibilant rattles were heard in various parts of the chest, indicating, along with the characters of the sputa, extensive bronchitis. There was dulness on percussion over the clavicle, on the right side, and posteriorly on the opposite part of the chest, and also a gurgling sound, and occasionally a cavernous ring, or coughing, under the clavicle on the same side,—signs which left no doubt as to the existence of phthisis, of the presence of tubercles, producing by their aggregation the dulness; softening of these, and the commencement of excavations, giving rise to the gurgling sound and cavernous ring.

Besides these physical sounds of phthisis, the usual febrile and hectic symptoms, there was also considerable roughness of the voice, indicating that the larynx was already also implicated in the disease. Under such circumstances no rational hope could be entertained of effecting any permanent benefit for the patient; and, as I remarked to you in my former lecture, the prognosis was, in the highest degree, unfavourable, not only from the physical signs of the disease which we detected at the time the patient was admitted, but from the rapid progress of the case up to this period, and more especially from the severity of the hæmoptysis, which, I said, was generally in proportion to the extent of the tubercular deposition.

Some relief of the cough was obtained by cupping and anodyne expectorants, together with the rest obtained in the hospital, quiet, and a regulated diet. During the second week he was put upon the use of the solution of tartarised antimony, in emetic doses, morning and evening; but, as no amendment appeared to follow its use, and as the patient complained of great fatigue and weakness from its operation, it was laid aside, and the previous treatment resumed. The expectoration, all along very abundant, had now become purulent, or puriform, and offensive; weakness advanced progressively with the copious night perspirations, and although the physical signs were not made the subject of farther inves-

tigation by myself, it was obvious that the pulmonary affection was becoming more and more aggravated and extensive. The last few nights before the death of the patient there was more or less delirium, and on the day also on which he died, we found him, unexpectedly, much agitated, moving about in bed, and talking incoherently,—with great dyspnoea, extreme congestion of the face and lips, the hands and feet; with coldness of the extremities, and the pulse at the wrist almost imperceptible.

The rather sudden and unexpected occurrence of these symptoms we attributed to an attack, most probably, of pneumonia, or pleuro-pneumonia, as the post-mortem appearances proved to have been the case. The state of the lungs will show you to what an extent the tubercular deposition may take place in a short period of time, and, when complicated with bronchitis, prove fatal before the tissue of the lung is much destroyed, or before the tuberculous matter has undergone extensive softening.

Before pointing out to you the morbid appearances found in the lungs, I may state that there was effusion into the cavity of the pleura and pericardium, and which always happens in cases similar to the present, in consequence of the pulmonary congestion, and which necessarily contributes to the increase of that state, and to hasten death by asphyxia. In consequence, also, of this state of the pulmonary circulation, together with the mechanical obstruction offered by the immense quantity of tuberculous matter contained in the lungs, the right side of the heart was distended with coagula of fibrinous blood, whilst the left contained a much less quantity of coagulated blood only, of a very dark colour. This difference was worthy of notice, as indicating not only the mode of death by asphyxia, from obstructed pulmonary circulation, but also the almost complete cessation of the special function of the lungs some time before death, the blood appearing to have passed through these organs to the left side of the heart, without having undergone the physiological change from the venous to the arterial state,—a circumstance which must also have contributed to hasten the period of dissolution. The congestion was also observed in the other organs, as the liver, spleen (which was very large and soft,) kidneys, and, in some degree, in the stomach.

The presence of tubercles was not confined to the lungs,—they were found in the intestines, the organs in which, *in adults*, they are most frequently met with after the lungs; or if tubercles are not found, the consequences of them are, viz., more or less ulceration. In this case we had both, but chiefly tubercles, and these were confined to the follicular structure of the intestines, the isolated and agglomerated follicles, and will afford you a beautiful illustration not only of the primary seat of the tuberculous matter in the intestines, but of the extensive ulcerations to which they give rise in the last, or colliquative stage of phthisis. We have also an instructive example of the morbid condition of the larynx,

produced by the same cause as the ulcerations in the intestines, which occasions the roughness of the voice and aphony which takes place in the phthisis. These appearances I shall now endeavour to point out to you.

Those of you who were present at the post-mortem will remember that the lungs were seen greatly enlarged, and did not collapse on laying open the cavity of the chest; circumstances which you will find satisfactorily explained by the presence of the immense quantity of tuberculous matter which these organs contained, and the state of inflammatory congestion, hepatisation, and œdema, which they presented.

On raising the lungs, cellular adhesions were seen uniting the pleuræ superiorly and posteriorly on the left side, and superiorly on the right side.

The left lung, as you perceive, presents externally a mottled aspect of red, purple, gray, and yellow, produced by the accumulation of arterial and venous blood in the parenchyma of the lungs and subpleural cellular tissue, and masses of tuberculous matter of various sizes; it feels very heavy, and almost as solid as liver. When laid open by a vertical section from the summit to the base, you perceive that it is chiefly composed of tubercles, grouped into irregular rounded masses varying from the size of hemp-seed to that of one or both fists. The tuberculous matter is readily recognised by its pale-yellow colour, opacity, and cheesy aspect and consistence,—the physical character which it usually presents in the crude state, as it is called. The softening of this matter, together with the destruction of the pulmonary tissue, have taken place in three separate portions of the lung, and the result has been the formation of what are called tubercular excavations. Two of these, of moderate size, occupy the summit of the lung, and a larger cavity is seen lower down and towards the outer side of the upper lobe, immediately beneath the pleura, the surface of which is covered by an organised false membrane of considerable density, which may, possibly, have prevented the occurrence of perforation of the pleura. The tubercular excavations present an irregular form, are but slightly anfractuous, and contain a quantity of mucopuriform matter, the secretion of the adventitious mucous membrane with which they are lined.

The small quantity of pulmonary tissue which remains unoccupied by tuberculous matter presents the appearance observed in the first and second stages of pneumonia, viz., an accumulation of blood, with some œdema; a certain degree of crepitation still remaining on pressure in some parts; and a still greater accumulation of blood, complete absence of crepitation, and diminished cohesion of the pulmonary tissue, in other parts. This lung weighs four pounds and a half. The right lung also contains a great quantity of tuberculous matter, which is much more abundant in the upper than in the other lobes, and is in the same stage as in the left lung. The upper lobe contains two excavations similar to those already described. The pulmonary tissue is generally congested and œdematous, but crepitant.

The weight of the lung is three pounds thirteen ounces.

The mucous membrane of the larynx is somewhat swollen, but pale; that of the trachea presents a multitude of circular, superficial ulcerations, which, being nearly of the same colour as the mucous membrane, which was slightly reddened, might have been overlooked by an inattentive observer. They are best seen by holding the trachea in an oblique position, as a shadow is then thrown inwards from their edges, and brings them into relief. They are, also, by far, more numerous on the right than on the left side of the trachea, a circumstance worthy of your attention, as it corroborates the opinion of Louis, that they arise from the long-continued irritation produced by the passage or contact of the morbid secretions of tubercular excavations and inflamed bronchi, favoured by the *position* of the patient. In this case the patient lay almost continually on the *right side*, and, as you have seen, the ulcerations were greatly more numerous on *this side* of the trachea, where, consequently, the influence of the exciting cause must have been more extensively and more frequently in operation than on the opposite side. The hoarseness, and, occasionally, partial aphony which occurred, particularly during the latter stages of the disease, were the consequence of these morbid states of the larynx and of the trachea.

With regard to the intestines, we find in them the same morbid alterations which we have just seen to exist in the trachea, as consequences of the tubercular disease. But, as most frequently happens in cases similar to the present, I mean in acute phthisis, these alterations are neither so extensive nor so conspicuous, as in chronic cases of this affection. They are not, however, on this account, less instructive in this instance, for we have them here, in several portions of the small intestine, in the early stage. Ulceration, so very common, and frequently so very extensive, in most cases of chronic phthisis, is seen only commencing in a few points of the ileum, and where the follicles had previously been the seat of tubercular deposition. That the tubercular deposition preceded, and was the cause of the ulceration here, as it preceded and was the cause of the excavations in the lungs, may be admitted from the state of the follicular structure in other parts of the intestine. In the glands of Peyer, or the glandulæ agminatæ; and also in some of the glandula solitariae, the tuberculous matter is distinctly seen accumulated in rounded masses varying from the size of a pin's head to that of hemp-seed, the surrounding mucous membrane being either slightly injected with red vessels or of its natural colour. In contiguous portions the mucous membrane is partly ulcerated, and somewhat congested, or quite pale. The ulcers are small, round, and smooth, and appear as if they were the result of the separation or discharge of the tuberculous matter from distended or partially destroyed follicles. These appearances are observed principally in the inferior portion of the ileum, as happens in the great majority of cases

of phthisis. But they are also seen in the caput cæcum coli. The very limited extent of the ulceration, and the very slight traces of the existence of inflammation in the intestines, enable us to account for the absence of colliquative diarrhœa in this case.

I shall not detain you by an attempt to explain the physical signs of the pulmonary affection by the lesions found in the lungs after death, and for this reason, that we did not employ either auscultation or percussion for a considerable time before the death of the patient. There is no doubt as to the local disease having made very great progress after the admission of the patient; that a great part of the tubercular deposition in the left lung took place after this period, and that the supervention of pneumonia of this lung was the immediate cause of death. The disease in the right lung was, as the physical signs clearly demonstrated, in a more advanced stage at, and some time after, the admission of the patient, than it was in the left lung; although the post-mortem examination has shown us that at the fatal termination of the disease, the latter lung was more extensively affected than the former. That this difference was not known during life is only attributable to the circumstance already noticed, viz., our not having examined the chest for a considerable time previously, from a desire not to disturb the patient, the nature and issue of whose case was but too obvious.—*Lancet*.

Relative Frequency of Phthisis in different Climates.

A proposition was made two or three years since, in the French Academy of Medicine, for the purpose of obtaining correct information as to the relative frequency of phthisis in different climates. This was to be obtained by the aid of these correspondents scattered through different parts of the world. There are many difficulties in the way of this arrangement, and it will, perhaps, never produce the good effects which were anticipated from it. A more feasible means of arriving at the truth is afforded by the British army surgeons, who are enabled to observe the relative frequency of development of phthisis amongst healthy individuals, placed nearly in the same condition as to exercise and food. From the reports of the army surgeons, we extract the following interesting statement, which we copy from the Dublin Journal, not having at hand the original document. It will be seen that the colder regions of our continent are by no means so favourable to the development of tuberculous diseases of the chest, as the milder temperature of southern stations. There is, however, one cause of error, which should be recollected. That is, the troops who are sent from Great Britain to tropical climates, are removed to a climate

much more unlike their own, than those who are stationed in Canada; hence it is probable that the entire change of constitution which follows, may be, to a great degree, productive of phthisis in those who are disposed to tuberculous affections.

There is one undoubted inference, that is, individuals labouring under phthisis may, perhaps, be benefited by a short stay of a few months in a tropical climate, but are very probably injured by a protracted residence. The effects of this residence are shown by the fact, that of a thousand troops, there are annually attacked with consumption in the United Kingdom 6.6, in Gibraltar 8.2, in Malta 6.7, in the Ionian Islands 5.3. That is, the disease is more fatal in the Mediterranean stations, (with one exception,) than in the British Islands. It is already well known that the same is true of the West Indies:

“Deductions from the Report.—Having, in the course of this report, frequently adverted to the uniform degree of prevalence which, notwithstanding the dissimilarity of climate, has been found to exist in the proportion of pulmonary affections in Nova Scotia and Canada, compared with Malta and Gibraltar, it seems unnecessary here to recapitulate the evidence on that subject; but it may be proper to inquire whether there exists, in the moral or physical condition of the troops in the Mediterranean and American stations, any difference likely to have influenced the results on which that comparison has been founded.

In the last section of the West India Report we showed that these diseases, even under the high temperature of the tropics, prevailed to a greater extent than in the United Kingdom. But it may be argued that several circumstances, independent of climate, were there in operation to induce that peculiarity; for instance, the innutritive qualities of the diet, the limited and defective state of the barrack accommodation, and the general prevalence of intemperance, were all causes tending to affect the health of the troops in no inconsiderable degree. We are, therefore, led to inquire whether any deteriorating circumstances of a similar nature exist in the Mediterranean from which the troops in North America are exempt, and by which the tendency to these diseases may have been so far aggravated as to counterbalance the advantages otherwise resulting from its mild and equable climate.

So far, however, from this being the case, every circumstance has been more favourable to the troops in the Mediterranean. The barrack and hospital accommodation, in Malta and Gibraltar at least, is not only of a more substantial nature than in Canada and Nova Scotia, but nearly double the space is allotted to each soldier; the diet, with the exception of a greater issue of salt meat in Gibraltar during the winter

months, is nearly the same, and the meals are regulated on similar principles. Intemperance, to which so much has been attributed as an exciting cause of these diseases, cannot be said to prevail to a greater extent in the Mediterranean than America, where the constant use of ardent spirits is likely to prove still more prejudicial than the low wines which form the principal medium of intoxication in the Mediterranean.

In all these respects, then, the troops in the Mediterranean have decidedly the advantage. We have yet to advert to another circumstance no less favourable to them: consumption, the most fatal of this class of diseases, is supposed to affect persons at an early period of life more than those of mature age. Now, owing to the frequency of desertion in North America, so many recruits have to be sent out from this country that nearly one-half of the force there is under twenty-five years of age, while in the Mediterranean, where no such necessity exists for large drafts from the dépôts, the proportion under that period of life is only from a third to a fourth of the whole; consequently the composition of the force in the Mediterranean renders it much less subject to the influence of consumption, if not also of the other pulmonary diseases which frequently precede it.

When we find, notwithstanding all these circumstances apparently so favourable to the greater development of these diseases in Canada and Nova Scotia, that the troops there do not suffer from them to a greater extent than in the Mediterranean, it would manifestly be incorrect to attribute their prevalence in North America to the reduced temperature and sudden atmospheric vicissitudes incident to that quarter of the globe, seeing that the sufferings of the troops from these diseases are equally great in other climates where no such causes are in operation to induce them.

We have been thus particular on this head, because, in the reports from the different medical officers in North America, we find a great portion of the sickness and mortality attributed to the severe and changeable nature of the climate inducing pulmonary affections of various kinds. It is true that many of the deaths arise from these causes, but in this respect the troops there are by no means singular in their sufferings, for, throughout the wide extent of the British Colonies, few stations can be found where soldiers are not affected by them in an equal degree, though, perhaps, owing to the greater extent of mortality by other diseases, these are less a subject of observation or remark. In addition to the instances already adduced on that head, it will be shown, in a future report, that even in the mild climate of the Mauritius, more soldiers are attacked by consumption, and nearly as many by inflammation of the lungs, as in the most inclement regions of North America, though we do not find that the prevalence or fatal character of these diseases attracts so much attention."

Case of the Accidental Administration of forty grains of Extract of Belladonna. By O. CLAYTON, Esq.—The author's motive in relating the above-named case, the subject of which recovered from the effects of the poison, was that the order of succession of the symptoms differed from that described by Dr. Christison; for in it sopor preceded the delirium, which did not come on for six hours after the administration of the poison, whereas the reverse is commonly the case. The author considers it also worthy of remark that the pulse, which was one hundred and sixty half an hour after the poison was taken, fell in twenty hours to fifty-eight, and that it varied from one hundred and sixty to one hundred and twenty during the sopor, but did not reach more than ninety-five during the delirium.

Mr. Caesar Hawkins referred the author of the paper to a case in St. George's hospital, some time since, under Sir B. Brodie, in which the patient swallowed nearly an ounce of the extract of belladonna, and yet recovered.

Dr. J. Johnson considered that as the stomach-pump was applied twenty-five minutes after the swallowing of the poison, nineteen-twentieths were brought up, and consequently no fact was adduced in support of the quantity that could be safely borne. He thought that if the forty grains had been retained, the effect would have been fatal. The largeness of the dose argued nothing, for half an ounce of the powder of ipecacuanha would produce no greater effect than five grains, as the former quantity would be immediately rejected, before any extra-physiological effect could be produced upon the stomach.

Lancet.

Scald Head.—A child who labours under this affection, and who is under Sir B. Brodie's care, had had several different applications made to the shaven scalp, but without any benefit being derived from them. The latter treatment has more particularly consisted in having the head shaved, and the scalp lightly touched with the strong acetic acid. This, however, caused so much pain, that it was necessary to stop it; and thus the remedy has not had a fair trial, nor is the disease in the least degree abated. Sir B. Brodie ordered the head to be again shaved, well washed with brown soap and water, and the ointment of the nitrate of mercury applied to it every morning. Whilst standing by the patient's bedside, Sir B. Brodie inquired whether any other surgeon, either in or out of the hospital, had seen the case, or given their opinion upon it, which question being answered in the negative, he observed that the red precipitate of mercury, in the proportion of two drachms to one ounce of ointment, was an exceedingly valuable preparation in some cases of the kind. He was acquainted with a surgeon who cured such cases by subjecting the scalp to the steam of hot water for one hour daily.

Ibid.